

### WYOMING VOLUNTEER FIREMEN'S PENSION FUND

ACTUARIAL VALUATION REPORT FOR THE YEAR BEGINNING JANUARY 1, 2015



April 27, 2015

Board of Trustees

Wyoming Volunteer Firemen's Pension Fund
6101 Yellowstone Road
Suite 500
Cheyenne, WY 82002

Dear Board of Trustees:

#### **Subject:** Actuarial Valuation as of January 1, 2015

We are pleased to present the report of the actuarial valuation of the Wyoming Volunteer Firemen's Pension Fund ("the Fund") for the plan year commencing January 1, 2015. This report describes the current actuarial condition of the Fund, determines the calculated employer contribution amount (the actuarially determined contribution amount), and analyzes changes in this contribution amount from the prior year. Valuations are prepared annually, as of January 1, the first day of the Fund's plan year.

#### Financing objectives and funding policy

The employee contribution amounts are specified in statute. The state treasurer shall deposit into the Fund 50% of the gross tax levied upon fire insurance premiums paid to insurance companies for fire insurance in the state. The purpose of this actuarial valuation is to determine whether or not these contribution amounts are sufficient to meet the obligations of the Fund.

#### Progress toward realization of financing objectives

The funded ratio (the ratio of the actuarial value of assets to the actuarial accrued liability) is a standard measure of a plan's funded status. The funded ratio, based upon the assumption of no future cost-of-living adjustments as of January 1, 2015 is 94.87%. In the January 1, 2014 valuation, this funded ratio was 92.24%. On a market value of assets basis, the funded ratio declined from 96.30% as of January 1, 2014 to 95.66% as of January 1, 2015.

#### **Benefit provisions**

The benefit provisions reflected in this valuation are those which were in effect on January 1, 2015. W.S. 9-3-454 prohibits benefit changes, including cost-of-living increases, unless the funded ratio stays above 100% plus a margin for adverse experience throughout the life of the benefit change. Therefore, this valuation does not include any liability for future cost-of-living increases. There were no benefit changes since the prior valuation.

The benefit provisions are summarized in Appendix B of the report.

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#### **Assumptions and methods**

Actuarial assumptions and methods are set by the Board, based upon recommendations made by the plan's actuary.

The results of the actuarial valuation are dependent upon the actuarial assumptions used. Actual results can and almost certainly will differ, as actual experience deviates from the assumptions. Even seemingly minor changes in the assumptions can materially change the liabilities, calculated contribution amounts and funding periods. The actuarial calculations presented in the report are intended to provide information for rational decision making.

All assumptions and methods are described in Appendix A of the report.

#### Data

Member data for retired, active and inactive members was supplied as of January 1, 2015 by the Fund's staff. We did not audit this data, but we did apply a number of tests to the data, and we concluded that it was reasonable and consistent with the prior year's data.

Asset and financial information as of January 1, 2015 was prepared by Wyoming Retirement System and is the responsibility of management. McGee, Hearne & Paiz, LLP provided us the asset and financial information and will opine on Wyoming Retirement System's statements.

#### Plan experience

As part of each valuation, we examine the Fund's experience relative to the assumptions. As experience in a given year deviates from the assumptions, a gain occurs if the liabilities grow slower than the assumption set anticipates and a loss occurs if the liabilities grow faster. This past fiscal year the Fund had a total experience gain of approximately \$1.65 million. The aggregate results of these analyses are disclosed in Tables 4 and 5 under Section III of the report.

#### **Actuarial certification**

All of the tables contained in this actuarial valuation report were prepared by Gabriel, Roeder, Smith & Company. Historical information for years prior to 2010 was prepared by the prior actuarial firm and was not subjected to our actuarial review. We certify that the information presented herein is accurate and fairly portrays the actuarial position of the Fund as of January 1, 2015.

All of our work conforms with generally accepted actuarial principles and practices, and with the Actuarial Standards of Practice issued by the Actuarial Standards Board. In our opinion, our calculations also comply with the requirements of state law and, where applicable, the Internal Revenue Code, ERISA, and the Statements of the Governmental Accounting Standards Board. The undersigned are independent actuaries and consultants. Mark Randall and Leslie Thompson are Enrolled Actuaries, are members of the American Academy of Actuaries, and both meet all

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the Qualification Standards of the American Academy of Actuaries. Finally, both of the undersigned are experienced in performing valuations for large public retirement systems.

Respectfully submitted,

Gabriel, Roeder, Smith & Company

Mark R. Randall

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**Senior Consultant** 

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EXECUTIVE SUMMARY

# **Executive Summary**

		January 1, 2015	January 1, 2014
	Item	No COLA	No COLA
1.	Contributions:		
	a. Total normal cost	\$943,869	\$887,996
	b. Employee contributions	(321,600)	(327,300)
	c. Other expected contributions		
	d. Net employer normal cost	\$622,269	\$560,696
	e. Amortization payment	325,853	479,221
	f. Administrative expenses	112,200	193,500
	g. Required contribution	\$1,060,322	\$1,233,417
	h. Estimated premium tax allocation	(1,995,000)	(1,900,000)
	i. Shortfall/(surplus)	(\$934,678)	(\$666,583)
2.	Funding Elements:		
	a. Market value of assets (MVA)	\$72,666,383	\$71,195,509
	b. Actuarial value of assets (AVA)	\$72,064,598	\$68,194,123
	c. Actuarial accrued liability (AAL)	\$75,964,986	\$73,930,299
	d. Unfunded/(overfunded) actuarial accrued liability (UAAL)	\$3,900,388	\$5,736,176
3.	Contributions and Ratios:		
	a. Annual required contribution	\$1,060,322	\$1,233,417
	b. Actual contributions	N/A	1,994,911
	i. Employer	N/A	-
	ii. Other	N/A	1,994,911
	c. Percentage contributed	N/A	161.74%
	d. Funded ratio on an actuarial basis (AVA/AAL)	94.87%	92.24%
	e. Funded ratio on a market basis (MVA/AAL)	95.66%	96.30%



DISCUSSION

### **Contribution Requirements**

- Exhibits throughout this report are based primarily, unless stated otherwise, on the assumption of no future cost-of-living adjustments (COLA)
- W.S. 9-3-454 prohibits benefit changes, including cost-of-living increases, unless the funded ratio stays above 100% plus a margin for adverse experience throughout the life of the benefit change. The actuarial value funded ratio is 94.87% and the market value funded ratio is 95.66%.
- The estimated State premium tax allocation is \$2.0 million this year, as provided by Wyoming staff.
- There were no changes in the benefit provisions since the prior valuation.
- There were no changes to the actuarial assumptions or methods since the prior valuation.
- The amortization payment is based upon the following assumptions:
  - 30-year open funding period
  - Amortization payment amounts are calculated in such a way that they will increase as a level dollar amount.
  - Future growth in the number of active members is not reflected in the annual valuation
- Analysis of the change in contribution amounts is shown in Table 5 under Section III of the report.
- The calculated funding period assuming an annual contribution of \$2.0 million is 3.5 years.
- Under House Bill HB00720, this plan will be merged with the Volunteer Emergency Medical Technician Fund as of July 1, 2015. The merged plan will receive contributions of up to 70% of gross fire insurance premium taxes paid on fire insurance policies in Wyoming.

#### **Calculation of Contribution Amounts**

The funds available to pay benefits come from two sources, contributions and investment income on those contributions (the majority of the funds available to pay benefits typically come from investment income). The Fund receives contributions from two sources, state contributions equal to 50% of gross fire insurance premium taxes and member contributions of \$12.50 per month per member. As shown in Table 1 under Section III of the report, the calculated employer contribution amount has three components:

- The normal cost (NC)
- The amortization payment
- The administrative expenses

The NC is the theoretical amount which would be required to pay the members' benefits if this amount had been contributed from each member's entry date and if the fund's experience exactly followed the actuarial assumptions. The NC is shown in Table 1 under Section III of the report.

The actuarial accrued liability (AAL) is the difference between (i) the actuarial present value of all future benefits for all current participants of the fund, including active, inactive and retired members, and (ii) the actuarial present value of future normal costs. Thus the AAL represents the liability associated with past years. The unfunded actuarial accrued liability (UAAL) is the difference between the AAL and the actuarial value of assets (AVA). It is the shortfall/excess between the liability associated with prior years (the AAL) and the assets actually accumulated (the AVA). This shortfall/excess can arise from several sources, including actuarial gains and losses which are caused by differences between actual experience and the plan's assumptions, changes to the plan's actuarial assumptions, and amendments to the benefit provisions.

The amortization payment is the amount required to fund this difference. It is the amount, expressed as a level dollar amount, necessary to amortize the UAAL. This amortization is over a period of 30 years. The Executive Summary above shows the Amortization Payment compared to that of last year.

Administrative expenses are the average of the actual expenses for the prior two years, with each year projected at 6.50% to the valuation date.

The calculated amount is used in determining the contributions necessary to meet the Actuarially Determined Contribution for the twelve-month period beginning January 1, 2015.

**GRS** 

#### **Financial Data and Experience**

As of January 1, 2015, the Fund has a total market value of \$73 million. Financial information was received from McGee, Hearne & Paiz, LLP.

Table 7 under Section III of the report shows a reconciliation of the market values between the beginning and end of 2014.

During 2014, the net investment return on the market value of assets (MVA), as reported by NEPC, LLC, was 4.70%, as shown in Table 10 under Section III of the report.

In determining the contribution rates and funded status of the Fund, an actuarial value of assets (AVA) is used rather than the market value of assets. The actuarial value of assets is based on the market value of assets with a five-year phase-in of actual investment return in excess of (or less than) expected investment income. Expected investment income is determined using the assumed investment return rate and the market value of assets (adjusted for receipts and disbursements during the year). The returns are computed net of administrative and investment expenses. An adjustment is made if the actuarial value is not within 20% of the Market Value. For any year following a year in which the 20% of market value adjustment was applied, the actuarial value is determined as if the adjustment was not applied in the previous year.

The development of the AVA is shown in Table 9 under Section III of the report. The AVA is \$72 million. The AVA is 99.17% of the MVA as of December 31, 2014, compared to 95.78% last year.

In addition to the market return, Table 10 also shows the return on the actuarial value of assets for the Fund. For 2014, this return was 8.64%. Because this is greater than the assumed 7.75% investment return, an actuarial gain occurred decreasing the unfunded actuarial accrued liabilities of the Fund by \$601,499. Table 10 shows a historical summary of market and actuarial return rates in recent years.

#### **Member Data**

Member data as of January 1, 2015 was supplied electronically by the Fund's staff. While we did not audit this data, we did perform various tests to ensure that it was internally consistent, consistent with the prior year's data, and was reasonable overall. Table 14 under Section III of the report shows a reconciliation of this member data from the prior valuation date to January 1, 2015.

Table 15 under Section III of the report shows the number of members by category (active, inactive, retired, etc.) along with member statistics. Tables 16 through 24 show summaries of certain historical data and include membership statistics.

Of the 2,144 active participants, 86 are eligible or will become eligible for retirement in 2015.

**GRS** 

#### **Benefit Provisions**

Appendix B of the report includes a more detailed summary of the benefit provisions for the Fund. A brief summary is as follows:

- Normal Retirement Eligibility
  - Eligibility varies with entry age according to the following schedule:

Entry Age	Retirement Age	Entry Age	Retirement Age
45 or less	60	56 - 57	66
46 - 47	61	58 - 59	67
48 - 49	62	60 - 61	68
50 - 51	63	62 - 63	69
52 - 53	64	64 - 65	70
54 - 55	65		

- Normal Retirement Benefit
  - A flat monthly dollar amount that varies based on service in accordance with W.S. 35-9-608(d)
- Spouse Benefits
  - In the event of active member or retiree death, the spouse is entitled to a benefit as stated in W.S. 35-9-608(d), which is equal to 66.67% of the retiree benefit. If the surviving spouse dies with children under 21, the benefit for the children is also stated in this table and is equal to 50% of the spouse benefit. There will be a minimum of \$5,000 paid for a given member account.
- Employee Contributions are required
  - \$12.50 per month
- Post-retirement Cost-of-Living Adjustments (COLAs)
  - W.S. 9-3-454 prohibits benefit changes, including cost-of-living increases, unless the funded ratio stays above 100% plus a margin for adverse experience throughout the life of the benefit change.

There have been no changes to plan provisions since the prior valuation.

### **Actuarial Methods and Assumptions**

Appendix A of the report includes a summary of the actuarial assumptions and methods used in this valuation. A few highlights are listed as follows:

- Costs are determined using the Entry Age Normal actuarial cost method, calculated as a level dollar amount.
- The unfunded actuarial accrued liability is amortized over an open 30 year period as a level dollar amount.
- The assumed annual investment return rate is 7.75%, with assumed inflation of 3.25%.
- Inactive vested participants are assumed to retire at normal retirement eligibility or the valuation date if already eligible to retire.
- No benefit data is available for members entitled to deferred benefits. The present value of benefits expected to be paid to vested inactive non-retired members is approximated using the data provided.

The average future lifetime for current pensioners is 15.7 years.

There have been no changes in actuarial assumptions or methods since the prior valuation.

### **GASB** and Funding Progress

Governmental Accounting Standards Board Statement Number 67 (GASB 67) contains certain accounting requirements for the Fund. Schedules, notes and required supplementary information are provided under separate cover.

# **SECTION III**

SUPPORTING EXHIBITS

### **Calculation of Annual Required Contribution**

(Assumes No Future Cost-Of-Living Increases)

	Item	January 1, 2015	January 1, 2014
1.	Employer normal cost	\$622,269	\$560,696
2.	Actuarial accrued liability for active members  a. Present value of future benefits for active members  b. Less: present value of future employer normal costs  c. Less: present value of future employee contributions  d. Actuarial accrued liability	\$36,242,565 (2,732,839) (1,777,364) \$31,732,362	\$36,694,767 (2,539,167) (1,812,869) \$32,342,731
3.	Total actuarial accrued liability for:  a. Retirees and beneficiaries  b. Disabled members  c. Inactive members  d. Active members (Item 2d)  e. Total	\$43,352,441 - 880,183 31,732,362 \$75,964,986	\$40,826,196 761,372 32,342,731 \$73,930,299
4.	Actuarial value of assets (Table 9)	\$72,064,598	\$68,194,123
<ul><li>5.</li><li>6.</li></ul>	Unfunded actuarial accrued liability (UAAL) (Item 3e - Item 4) Funding period	\$3,900,388 30 years	\$5,736,176 30 years
7.	Assumed payroll growth rate	0.00%	0.00%
8.	<ul> <li>Employer contribution requirement</li> <li>a. UAAL amortization payment</li> <li>b. Employer normal cost</li> <li>c. Administrative expenses</li> <li>d. Contribution requirement (a + b + c)</li> </ul>	\$325,853 622,269 112,200 \$1,060,322	\$479,221 560,696 193,500 \$1,233,417



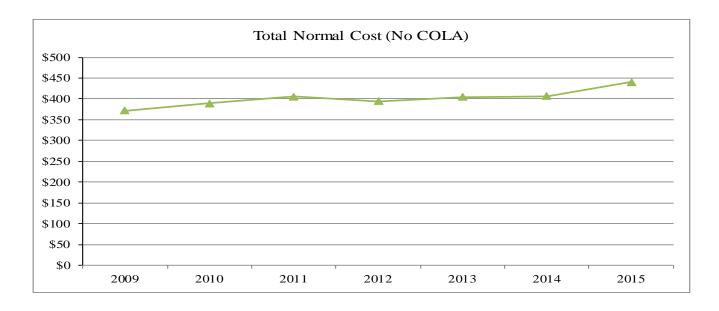
Cost Breakdown (Assumes No Future Cost-Of-Living Increases)

	Present Value of Future Normal Costs	Actuarial Accrued Liabilities	Total Present Value of Benefits
Item	(1)	(2)	(3) = (1) + (2)
Age and service allowances based on total service and disability benefits likely to be rendered by present active members	\$3,465,942	\$31,132,494	\$34,598,436
Death-in-service benefits likely to be paid on behalf of present active members (employer financed portion)	270,063	245,888	515,951
Separation benefits (refunds of contributions and deferred allowances) likely to be paid to present active members	774,198	353,980	1,128,178
Benefits likely to be paid to vested inactive members	-	-	-
Benefits to be paid to members due refunds	-	880,183	880,183
Benefits to be paid to current retirees, disabled members, beneficiaries, and future beneficiaries of current retirees	-	43,352,441	43,352,441
Total	\$4,510,203	\$75,964,986	\$80,475,189
Actuarial value of assets	-	\$72,064,598	\$72,064,598
Liabilities to be covered by future contributions	\$4,510,203	\$3,900,388	\$8,410,591

### **History of Total Normal Cost**

(Assumes No Future Cost-Of-Living Increases)

Fiscal Year Ending December 31	Total Normal Cost Per Active (No COLA)
(1)	(2)
2009	\$372
2010	389
2011	406
2012	394
2013	405
2014	407
2015	440



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### **Calculation of Total Actuarial Gain/(Loss)**

(Assumes No Future Cost-Of-Living Increases)

Item	<b>January 1, 2015</b>
1. Derivation of experience gain/(loss)	
a. Unfunded actuarial accrued liability (UAAL) - previous valuation	\$5,736,176
b. Normal cost (NC) for fiscal year ending December 31, 2014	887,996
c. Actual adminstrative expenses for fiscal year ending December 31, 2014	68,274
d. Actuarially determined contribution for fiscal year ending December 31, 2014	1,560,717
e. Interest accrual:	
(i) For whole year on (a)	444,554
(ii) For half year on (b) $+$ (c) $-$ (d)	(23,422)
(iii) Total interest: $(e)(i) + (e)(ii)$	421,132
f. Change in UAAL due to plan changes	-
g. Change in UAAL due to assumption change	-
h. Expected UAAL current year: $(a) + (b) + (c) - (d) + (e)(iii) + (f) + (g)$	5,552,861
i. Actual UAAL current year	3,900,388
j. Experience gain/(loss): (h) - (i)	1,652,473
k. Experience gain/(loss) as a % of actuarial accrued liability	2.18%
2. Approximate portion of gain/(loss) due to investments	
(at actuarial value)	\$601,499
3. Approximate portion of gain/(loss) due to contributions	
higher or lower than expected	\$805,082
4. Approximate portion of gain/(loss) due to liabilities: (1)(j) - (2) - (3)	\$245,892
a. Age & service retirements	403,240
b. Death-in-service	(18,901)
c. Withdrawal from employment	(98,034)
d. Rehires	(207,687)
e. Death after retirement	94,596
f. Other	72,677
g. Other as a % of actuarial accrued liability	0.10%

### **Change in Calculated Contribution Amount Since the Prior Valuation**

(Assumes No Future Cost-Of-Living Increases)

Item	January 1, 2015
1. Calculated contribution amount as of January 1, 2014	\$1,233,417
2. Change in contribution amount during year	
a. Change in employer normal cost	\$61,573
b. Assumption changes	-
c. Recognition of prior asset losses (gains)	(65,258)
d. Actuarial (gain) loss from current year asset performance	34,271
e. Actuarial (gain) loss from liability sources and administrative expenses	(132,755)
f. Difference between contributions made and required contributions	(67,887)
g. Open amortization period reset to 30 years	(3,039)
h. Other changes	-
i. Total change	(\$173,095)
3. Calculated contribution amount as of January 1, 2015	\$1,060,322

## **Statement of Plan Net Assets**

Assets at Market Value							
	Item FYE 2014 FYE 2013						
1. Cash	and cash equivalents (operating cash)	\$4,486,584	\$2,449,854				
2. Recei	vables						
a.	Insurance premium tax	\$790,525	\$828,912				
b.	Employee contributions	23,970	27,325				
c.	Securities sold	35,771	306,389				
d.	Accrued interest and dividends	187,448	222,478				
e.	Currency contract receivable	10,588,560	9,248,201				
f.	Other	0	0				
g.	Rebate and fee income receivable	0	0				
h.	Total receivables	\$11,626,274	\$10,633,305				
3. Invest	3. Investments, at fair value		\$76,293,011				
4. Liabili	ties						
a.	Benefits and refunds payable	(\$23,580)	\$0				
b.	Securities purchased	(654,381)	(936,522)				
c.	Administrative and consulting fees payable	(127,231)	(119,067)				
d.	Currency contract payable	(10,351,168)	(9,295,268)				
e.	e. Securities lending collateral		(7,829,804)				
f.	Total liabilities	(\$17,229,825)	(\$18,180,661)				
5. Total	market value of assets available for benefits	\$72,666,383	\$71,195,509				

## **Reconciliation of Plan Net Assets**

	Assets at Market Value				
	Item	FYE 2014	FYE 2013		
A.	Market value of assets at beginning of year	\$71,195,509	\$64,146,166		
В.	Contribution income:				
	1. Contributions				
	a. Employee	\$325,760	\$341,695		
	b. Employer	-	-		
	c. Other	2,010,006	2,347,267		
	d. Total	\$2,335,766	\$2,688,962		
	2. Investment income				
	a. Interest, dividends, and other income	\$1,765,300	\$1,665,403		
	b. Net appreciation	2,066,944	7,121,238		
	c. Investment expenses	(457,162)	(402,913)		
	d. Net investment income	\$3,375,082	\$8,383,728		
	3. Securities lending				
	a. Gross income	\$43,111	\$46,527		
	b. Deductions	(6,459)	(6,976)		
	c. Net investment income	\$36,652	\$39,551		
	4. Benefits and refunds				
	a. Refunds	(\$42,661)	(\$59,785)		
	b. Regular monthly benefits	(4,165,691)	(3,869,364)		
	c. Total	(\$4,208,352)	(\$3,929,149)		
	5. Administrative and miscellaneous expenses	(\$68,274)	(\$133,749)		
C.	Market value of assets at end of year	\$72,666,383	\$71,195,509		

### **Progress of Fund Through December 31, 2014**

Plan Year				Net			
Ending	<b>Employer</b>	<b>Employee</b>	Administrative	Investment	Benefit		<b>Actuarial Value</b>
December 31	Contributions*	Contributions**	Expenses	Income**	Payments	Transfers	of Assets
Total	\$22,600,395	\$5,165,553	(\$1,763,895)	\$46,515,586	(\$37,261,843)	-	
2000	\$942,898	\$325,348	(\$53,269)	\$5,702,055	(\$979,598)	-	\$42,746,236
2001	995,498	335,959	(87,919)	4,239,600	(1,131,899)	-	47,097,475
2002	886,722	352,588	(97,590)	(710,314)	(1,378,187)	-	46,150,694
2003	1,599,882	345,709	(94,390)	3,867,635	(1,556,933)	-	50,312,597
2004	1,471,932	347,592	(113,717)	1,546,671	(1,730,846)	-	51,834,229
2005	1,484,406	338,705	(200,280)	2,758,924	(1,917,814)	-	54,298,170
2006	1,418,209	348,523	(106,738)	4,631,670	(2,121,659)	-	58,468,175
2007	1,688,766	351,442	(72,836)	6,504,026	(2,393,734)	-	64,545,839
2008	1,515,607	334,638	(105,763)	(8,174,877)	(2,753,750)	-	55,361,694
2009	1,494,517	385,611	(106,079)	9,719,041	(3,014,775)	-	63,840,009
2010	1,598,736	359,534	(121,887)	1,712,634	(3,117,539)	-	64,271,487
2011	1,649,218	335,855	(185,852)	619,002	(3,347,691)	-	63,342,019
2012	1,511,826	321,499	(215,552)	1,181,985	(3,679,917)	-	62,461,860
2013	2,347,267	341,695	(133,749)	7,106,199	(3,929,149)	-	68,194,123
2014	1,994,911	340,855	(68,274)	5,811,335	(4,208,352)		72,064,598

<sup>\*</sup> Employer contributions equal to 50% of the gross fire insurance premium taxes from fire insurance policies written in Wyoming Employee contributions may include member redeposits and member service purchase contributions.

<sup>\*\*</sup> Net of investment expenses

### **Development of Actuarial Value of Assets**

Item	FYE 2014	FYE 2013
1. Actuarial value of assets, beginning of year (before corridor)	\$68,194,123	\$62,461,860
2. Market value, end of year	\$72,666,383	\$71,195,509
3. Market value, beginning of year	\$71,195,509	\$64,146,166
4. Non-investment/administrative net cash flow:		
a. Employee contributions	\$325,760	\$341,695
b. Employer contributions	-	-
c. Other contributions	2,010,006	2,347,267
d. Refund of employee accounts	(42,661)	(59,785)
e. Retirement benefits	(4,165,691)	(3,869,364)
f. Administrative expenses	(68,274)	(133,749)
g. Total net cash flow: [sum of (4a) through (4f)]	(\$1,940,860)	(\$1,373,936)
5. Investments and securities lending:	X: , , ,	, , , ,
a. Interest and dividends on investments	\$1,765,300	\$1,665,403
b. Gross income from securities lending	43,111	46,527
c. Fees and expenses	(463,621)	(409,889)
d. Total net income: [sum of (5a) through (5c)]	\$1,344,790	\$1,302,041
6. Investment income:	Ψ1,511,750	φ1,302,011
a. Actual market return: (2) - (3) - (4g) - (5d)	\$2,066,944	\$7,121,238
b. Assumed rate of return**	7.75%	8.00%
c. Assumed amount of return	4,099,057	3,775,752
d. Amount subject to phase-in: (6a) - (6c)	(\$2,032,113)	\$3,345,486
7. Phase-in recognition of investment income:	(\$2,032,113)	\$5,545,460
	(\$406 422)	\$660,007
a. Current year: 0.20 * (6d)	(\$406,423)	\$669,097
b. First prior year	669,097	653,744
c. Second prior year	653,744	(1,087,306)
d. Third prior year	(1,087,306)	538,376
e. Fourth prior year	538,376	1,254,495
f. Total recognition	\$367,488	\$2,028,406
8. Actuarial value of assets, end of year		
a. Preliminary actuarial value of assets, end of year: (1) + (4g) + (5d) + (6c) + (7f)	\$72,064,598	\$68,194,123
b. Upper corridor limit: $120\% * (2)$	\$87,199,660	\$85,434,611
c. Lower corridor limit: 80% * (2)	\$58,133,106	\$56,956,407
d. Actuarial value of assets, end of year	\$72,064,598	\$68,194,123
9. Difference between market and actuarial value of assets	\$601,785	\$3,001,386
10. Actuarial rate of return	8.64%	11.50%
11. Market rate of return*	4.70%	13.53%
12. Ratio of actuarial value to market value of assets	99.17%	95.78%

<sup>\*</sup> Current year market rate of return is based on unaudited data and is supplied by NEPC, LLC.

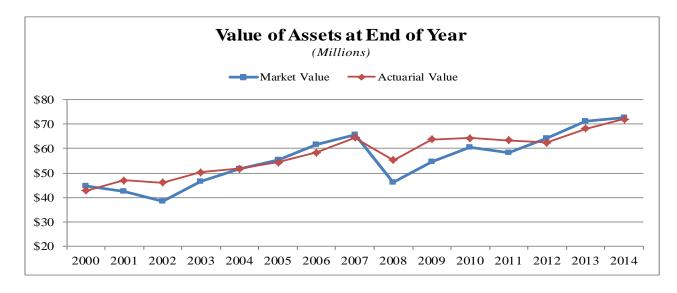


<sup>\*\*</sup> The interest accrual of 8.00% is used for the period January 1, 2013 through December 31, 2013. Effective January 1, 2014, the assumed interest rate is 7.75%.

### **History of Investment Returns**

Plan Year	Market	Actuarial
(1)	(2)	(3)
2000	-0.99%	15.44%
2001	-4.47%	9.91%
2002	-9.29%	-1.51%
2003	21.00%	8.35%
2004	11.54%	3.07%
2005	8.22%	5.34%
2006	12.63%	8.57%
2007	7.44%	11.16%
2008	-29.63%	-12.77%
2009	23.72%	17.75%
2010	13.80%	2.71%
2011	-0.90%	0.97%
2012	14.05%	1.90%
2013	13.53%	11.50%
2014	4.70%	8.64%
Average returns:		
Last five years:	8.96%	3.19%
Last ten years:	5.76%	4.33%

The market rates above were provided by NEPC, LLC. The actuarial rates above are based on the financial information provided by McGee, Hearne & Paiz, LLP.



## **Solvency Test**

Valuation	Total Active Member	Inactive and Pensioner	Employer Financed Active	Actuarial	Percer	ntage of Lia	abilities
Date	Contributions	Liability	<b>Accrued Liability</b>	Value of		ered by As	
January 1	(1)	(2)	(3)	Assets	(1)	(2)	(3)
2005	\$4,464,808	\$20,323,000	\$22,042,000	\$51,834,229	100%	100%	100.0%
2006	4,676,280	22,831,000	24,197,000	54,298,170	100%	100%	100.0%
2007	4,801,436	25,883,000	24,678,000	58,468,175	100%	100%	100.0%
2008	4,890,413	31,398,000	30,611,000	64,545,839	100%	100%	92.3%
2009	4,999,123	34,927,000	32,431,000	55,361,694	100%	100%	47.6%
2010	5,191,786	29,049,496	24,375,252	63,840,009	100%	100%	100.0%
2011	5,235,003	31,405,347	24,785,632	64,271,487	100%	100%	100.0%
2012	5,249,169	33,591,073	24,998,749	63,342,019	100%	100%	98.0%
2013	5,178,077	37,106,798	24,490,473	62,461,860	100%	100%	82.4%
2014	5,186,854	41,587,568	27,155,877	68,194,123	100%	100%	78.9%
2015	5,143,872	44,232,624	26,588,490	72,064,598	100%	100%	85.3%

Effective January 1, 2010, liabilities are calculated assuming no future cost-of-living increases.

### **Schedule of Funding Progress**

(1)	(2)	(3)	(4)	(5)	(6)
Valuation Date January 1	Actuarial Value of Assets	Actuarial Accrued Liability (AAL)	Unfunded AAL (UAAL) [(3) - (2)]	Funded Ratio [(2)/(3)]	UAAL per Active Member
2001	\$42,746,236	\$26,950,900	(\$15,795,336)	158.61%	(\$7,458)
2002	47,097,475	39,355,900	(7,741,575)	119.67%	(3,619)
2003	46,150,694	40,725,500	(5,425,194)	113.32%	(2,508)
2004	50,312,597	43,818,100	(6,494,497)	114.82%	(2,914)
2005	51,834,229	46,830,000	(5,004,229)	110.69%	(2,210)
2006	54,298,170	51,703,700	(2,594,470)	105.02%	(1,135)
2007	58,468,175	55,361,800	(3,106,375)	105.61%	(1,368)
2008	64,545,839	66,899,300	2,353,461	96.48%	1,058
2009	55,361,694	61,796,500	6,434,806	89.59%	2,861
2010	63,840,009	58,616,534	(5,223,475)	108.91%	(2,342)
2011	64,271,487	61,425,982	(2,845,505)	104.63%	(1,275)
2012	63,342,019	63,838,991	496,972	99.22%	227
2013	62,461,860	66,775,348	4,313,488	93.54%	1,971
2014	68,194,123	73,930,299	5,736,176	92.24%	2,629
2015	72,064,598	75,964,986	3,900,388	94.87%	1,819

Effective January 1, 2010, liabilities are calculated assuming no future cost-of-living increases.

### Schedule of Contributions from the Employer(s) and Other Contributing Entities

(1)	(2)	(3)	(4)
Fiscal Year Ending December 31	Actuarially Determined Contribution	Employer Contributions*	Percentage of Actuarially Determined Contribution Contributed [(3)/(2)]
2004	ф <b>7</b> 7.4.200	Ф1 471 020	105 140/
2004	\$754,300	\$1,471,932	195.14%
2005	358,300	1,484,406	414.29%
2006	644,200	1,418,209	220.15%
2007	532,000	1,688,766	317.44%
2008	1,007,700	1,515,607	150.40%
2009	1,225,000	1,494,517	122.00%
2010	203,078	1,598,736	787.25%
2011	453,174	1,649,218	363.93%
2012	742,745	1,511,826	203.55%
2013	1,146,605	2,347,267	204.71%
2014	1,233,417	1,994,911	161.74%
2015	1,060,322	-	-

<sup>\*</sup> 50% of the gross fire insurance premium taxes from fire insurance policies written in Wyoming.

Effective January 1, 2010, ARCs are calculated assuming no future cost-of-living increases.

## **Reconciliation of Participant Data**

	Active Participants	Inactive Participants	Retired Participants	Beneficiaries	Total
Number as of January 1, 2014	2,182	1,245	990	190	4,607
New participants	186	15	-	-	201
Vested terminations	(29)	29	-	-	-
Retirements	(75)	(5)	80	-	-
Disability	-	-	-	-	-
Deceased with beneficiary	(3)	-	(16)	19	-
Deceased without beneficiary	-	-	(14)	(8)	(22)
Due refunds	(138)	138	-	-	-
Lump sum payoffs	(10)	(39)	-	-	(49)
Rehires/return to active	31	(31)	-	-	-
Certain period expired	-	-	-	-	-
Reclassifications	-	-	-	-	-
Data corrections	-			2	2
Number as of January 1, 2015	2,144	1,352	1,040	203	4,739

# **Demographic Statistics**

	Janua		
	2015	2014	Delta
Active Participants			
Number	2,144	2,182	-1.7%
Vested	1,036	1,052	
Not vested	1,108	1,130	
Average age (years)	44.46	44.67	-0.5%
Average service (years)	11.77	12.21	-3.6%
Average entry age (years)	32.69	32.46	0.7%
Total employee contributions with interest	\$5,143,872	\$5,186,854	-0.8%
Average employee contributions with interest	\$2,399	\$2,377	0.9%
Retirees			
Number	1,040	990	5.1%
Average age (years)	69.52	69.38	0.2%
Total annual benefits	\$3,757,682	\$3,538,467	6.2%
Average annual benefit	\$3,613	\$3,574	1.1%
<u>Beneficiaries</u>			
Number	203	190	6.8%
Average age (years)	70.65	71.48	-1.2%
Total annual benefits	\$484,963	\$455,408	6.5%
Average annual benefit	\$2,389	\$2,397	-0.3%
Participants Due Refunds			
Number	1,352	1,245	8.6%
Total Refunds Due	\$880,183	\$763,138	15.3%

# Distribution of Male Active Members by Age and by Years of Service

Average Age = 44.3 Average Service = 12.2

	Age	Whole Years of Service at Valuation Date									
La	st Birthday	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	Totals		
Less than 20	Count	13	-	-	-	-	-	-			
	Total Contributions	\$1,638	-	-	-	-	-	-	\$1,6		
	Avg. Contributions	\$126	-	-	-	-	-	-	\$1		
20-24	Count	62	4	-	-	-	-	-			
	Total Contributions	17,248	\$3,366	-	-	-	-	-	20,6		
	Avg. Contributions	278	\$842	-	-	-	-	-	3		
25-29	Count	113	36	4	-	-	-	-	1		
	Total Contributions	31,459	37,207	\$6,096	-	-	-	-	74,7		
	Avg. Contributions	278	1,034	\$1,524	-	-	-	-	4		
30-34	Count	107	80	36	5	-	-	-	2		
	Total Contributions	40,389	88,813	71,167	\$14,394	-	-	-	214,7		
	Avg. Contributions	377	1,110	1,977	\$2,879	-	-	-	ç		
35-39	Count	85	70	47	29	3	-	-	2		
	Total Contributions	32,741	79,165	101,028	84,301	\$12,820	-	-	310,0		
	Avg. Contributions	385	1,131	2,150	2,907	\$4,273	-	-	1,3		
40-44	Count	61	42	52	40	21	2	-	2		
	Total Contributions	22,697	45,902	112,515	136,641	97,439	\$11,728	-	426,9		
	Avg. Contributions	372	1,093	2,164	3,416	4,640	\$5,864	-	1,9		
45-49	Count	32	50	53	29	43	27	5	2		
	Total Contributions	18,032	56,277	116,867	100,686	214,527	150,096	\$35,500	691,9		
	Avg. Contributions	563	1,126	2,205	3,472	4,989	5,559	\$7,100	2,8		
50-54	Count	28	40	50	45	68	70	24	3		
	Total Contributions	8,111	43,336	107,677	151,320	316,902	407,593	183,979	1,218,		
	Avg. Contributions	290	1,083	2,154	3,363	4,660	5,823	7,666	3,		
55-59	Count	27	32	44	42	62	103	77	3		
	Total Contributions	12,492	35,513	100,293	141,792	286,261	606,086	578,092	1,760,		
	Avg. Contributions	463	1,110	2,279	3,376	4,617	5,884	7,508	4,5		
60-64	Count	6	18	24	2	-	-	1			
	Total Contributions	1,266	19,155	52,009	5,511	-	-	1,673	79,		
	Avg. Contributions	211	1,064	2,167	2,756	-	-	1,673	1,		
65-69	Count	10	5	1	-	-	-	-			
	Total Contributions	2,422	5,329	1,205	-	-	-	-	8,		
	Avg. Contributions	242	1,066	1,205	_			-			
70 & Over	Count	2	-	-	_	_	_	-			
	Total Contributions	451	-	-	-	-	-	-			
	Avg. Contributions	225	-	-	-	-	-	-			
Totals	Count	546	377	311	192	197	202	107	1,9		
	Total Contributions	\$188,946	\$414,063	\$668,858	\$634,646	\$927,949	\$1,175,503	\$799,244	\$4,809,2		
	Avg. Contributions	\$346	\$1,098	\$2,151	\$3,305	\$4,710	\$5,819	\$7,470	\$2,4		



# Distribution of Female Active Members by Age and by Years of Service

Average Age = 45.7 Average Service = 7.9

Age		Whole Years of Service at Valuation Date								
Last Birthday		0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	Totals	
Less than 20	Count	3	-	-	-	-	-	-		
	Total Contributions	\$483	-	-	-	-	-	-	\$48	
	Avg. Contributions	\$161	-	-	-	-	-	-	\$16	
20-24	Count	12	-	-	-	-	-	-	1	
	Total Contributions	2,976	-	-	-	-	-	-	2,97	
	Avg. Contributions	248	-	-	-	-	-	-	24	
25-29	Count	14	9	-	-	-	-	-	2	
	Total Contributions	5,532	\$8,972	-	-	-	-	-	14,50	
	Avg. Contributions	395	\$997	-	-	-	-	-	63	
30-34	Count	25	7	1	1	-	-	-	3	
	Total Contributions	7,205	7,324	\$1,696	\$2,937	-	-	-	19,16	
	Avg. Contributions	288	1,046	\$1,696	\$2,937	-	-	-	56	
35-39	Count	21	10	6	2	-	-	-	3	
	Total Contributions	6,540	11,672	11,254	6,274	-	-	-	35,74	
	Avg. Contributions	311	1,167	1,876	3,137	-	-	-	91	
40-44	Count	12	7	2	2	1	-	-	2	
	Total Contributions	4,500	7,395	3,446	5,562	\$4,875	-	-	25,77	
	Avg. Contributions	375	1,056	1,723	2,781	\$4,875	-	-	1,07	
45-49	Count	4	2	3	2	-	1	1	1	
	Total Contributions	955	1,752	6,509	5,278	-	\$15,195	\$7,496	37,18	
	Avg. Contributions	239	876	2,170	2,639	-	\$15,195	\$7,496	2,86	
50-54	Count	7	3	7	2	2	6	-	2	
	Total Contributions	1,980	3,267	15,329	6,087	8,937	34,604	-	70,20	
	Avg. Contributions	283	1,089	2,190	3,044	4,468	5,767	-	2,60	
55-59	Count	2	2	3	5	8	5	4	2	
	Total Contributions	554	1,945	5,782	17,551	36,259	28,851	31,147	122,08	
	Avg. Contributions	277	973	1,927	3,510	4,532	5,770	7,787	4,21	
60-64	Count	4	1	1	-	-	-	-		
	Total Contributions	1,450	1,613	2,053	-	-	-	-	5,11	
	Avg. Contributions	362	1,613	2,053	-	-	-	-	85	
65-69	Count	1	1	-	-	-	-	-		
	Total Contributions	363	1,063	-	-	-	-	-	1,42	
	Avg. Contributions	363	1,063	-	-	-	-	-	71	
70 & Over	Count	-	-	-	-	-	-	-	_	
	Total Contributions	-	-	-	-	-	-	-	-	
	Avg. Contributions	-		-		-		-	-	
Totals	Count	105	42	23	14	11	12	5	21	
	Total Contributions	\$32,538	\$45,003	\$46,068	\$43,690	\$50,071	\$78,650	\$38,643	\$334,66	
	Avg. Contributions	\$310	\$1,072	\$2,003	\$3,121	\$4,552	\$6,554	\$7,729	\$1,579	

# Distribution of Total Active Members by Age and by Years of Service

Average Age = 44.5 Average Service = 11.8

	Age			Whole	Years of Service	e at Valuation D	ate		
La	st Birthday	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	Totals
Less than 20	Count	16	-	-	-	-	-	-	16
	Total Contributions	\$2,121	-	-	-	-	-	-	\$2,121
	Avg. Contributions	\$133	-	-	-	-	-	-	\$133
20-24	Count	74	4	-	-	-	-	-	78
	Total Contributions	20,224	\$3,366	-	-	-	-	-	23,590
	Avg. Contributions	273	\$842	-	-	-	-	-	302
25-29	Count	127	45	4	-	-	-	-	176
	Total Contributions	36,991	46,179	\$6,096	-	-	-	-	89,266
	Avg. Contributions	291	1,026	\$1,524	-	-	-	-	507
30-34	Count	132	87	37	6	-	-	-	262
	Total Contributions	47,595	96,137	72,863	\$17,332	-	-	-	233,926
	Avg. Contributions	361	1,105	1,969	\$2,889	-	-	-	893
35-39	Count	106	80	53	31	3	-	-	273
	Total Contributions	39,281	90,837	112,281	90,575	\$12,820	-	-	345,795
	Avg. Contributions	371	1,135	2,119	2,922	\$4,273	-	-	1,267
40-44	Count	73	49	54	42	22	2	-	242
	Total Contributions	27,197	53,297	115,961	142,204	102,314	\$11,728	-	452,701
	Avg. Contributions	373	1,088	2,147	3,386	4,651	\$5,864	-	1,871
45-49	Count	36	52	56	31	43	28	6	252
	Total Contributions	18,987	58,028	123,376	105,964	214,527	165,291	\$42,996	729,169
	Avg. Contributions	527	1,116	2,203	3,418	4,989	5,903	\$7,166	2,894
50-54	Count	35	43	57	47	70	76	24	352
	Total Contributions	10,091	46,603	123,006	157,408	325,838	442,198	183,979	1,289,123
	Avg. Contributions	288	1,084	2,158	3,349	4,655	5,818	7,666	3,662
55-59	Count	29	34	47	47	70	108	81	416
	Total Contributions	13,046	37,458	106,076	159,343	322,520	634,937	609,239	1,882,618
	Avg. Contributions	450	1,102	2,257	3,390	4,607	5,879	7,521	4,526
60-64	Count	10	19	25	2	-	-	1	57
	Total Contributions	2,716	20,768	54,062	5,511	-	-	1,673	84,731
	Avg. Contributions	272	1,093	2,162	2,756	-	-	1,673	1,487
65-69	Count	11	6	1	-	-	-	-	18
	Total Contributions	2,784	6,392	1,205	-	-	-	-	10,382
	Avg. Contributions	253	1,065	1,205	-	-	-	-	577
70 & Over	Count	2	-	-	-	-	-	-	2
	Total Contributions	451	-	-	-	-	-	-	451
	Avg. Contributions	225	-	-			-	-	225
Totals	Count	651	419	334	206	208	214	112	2,144
	Total Contributions	\$221,484	\$459,066	\$714,926	\$678,337	\$978,020	\$1,254,153	\$837,887	\$5,143,872
	Avg. Contributions	\$340	\$1,096	\$2,140	\$3,293	\$4,702	\$5,861	\$7,481	\$2,399

### **Schedule of Pension Recipients Added to and Removed from Rolls**

T3° 1.57	A alala a	l to Rolls	n	le Du	7		Percent	<b>A</b>	
Fiscal Year Ending December 31	Annual Pension Count Benefits		Removed from Rolls Annual Pension Count Benefits		Total Annual Pension Count Benefits		Increase in Annual Pension Benefits	Average Annual Pension Benefit	
2008	67	\$226,304	17	\$11,056	848	\$2,721,564	9.55%	\$3,209	
2009	76	258,300	26	70,754	898	2,909,410	9.33% 7.00%	3,240	
2010	78	286,896	17	44,650	959	3,151,656	8.00%	3,286	
2011	78	288,302	21	60,217	1,016	3,379,741	7.24%	3,327	
2012	119	419,427	29	79,129	1,106	3,720,039	10.07%	3,364	
2013	100	350,541	26	76,706	1,180	3,993,874	7.36%	3,385	
2014	101	363,218	38	114,448	1,243	4,242,644	6.23%	3,413	

# Retirees by Monthly Benefit and Age

Males			Age	Last Bir	thday		
Benefit Amount	Under 60	60-64	65-69	70-74	75-79	80 & over	Total
Under \$50	-	-	-	-	-	-	-
<b>\$50 - 99</b>	-	-	-	1	-	1	2
<b>\$100 - 149</b>	-	1	4	9	4	1	19
<b>\$150 - 199</b>	-	16	43	15	14	27	115
\$200 - 249	-	35	36	44	31	42	188
\$250 - 299	-	52	53	36	15	11	167
\$300 - 349	-	85	65	20	5	14	189
\$350 - 399	-	31	21	14	11	6	83
\$400 & Over	-	101	40	32	20	3	196
Total	-	321	262	171	100	105	959
Females							
Benefit Amount	Under 60	60-64	65-69	70-74	75-79	80 & over	Total
Under \$50	-	-	-	-	-	-	-
<b>\$50 - 99</b>	-	-	-	-	-	-	-
<b>\$100 - 149</b>	-	-	1	5	2	-	8
<b>\$150 - 199</b>	-	2	5	2	2	3	14
\$200 - 249	-	4	5	4	6	-	19
\$250 - 299	-	6	7	5	-	-	18
\$300 - 349	-	6	4	4	1	-	15
\$350 - 399	-	3	1	-	-	-	4
\$400 & Over	-	2	1	-	-	-	3
Total	-	23	24	20	11	3	81
Males & Females							
Benefit Amount	Under 60	60-64	65-69	70-74	75-79	80 & over	Total
Under \$50	-	-	-	-	-	-	-
<b>\$50 - 99</b>	-	-	-	1	-	1	2
<b>\$100 - 149</b>	-	1	5	14	6	1	27
<b>\$150 - 199</b>	-	18	48	17	16	30	129
\$200 - 249	-	39	41	48	37	42	207
\$250 - 299	-	58	60	41	15	11	185
\$300 - 349	-	91	69	24	6	14	204
\$350 - 399	-	34	22	14	11	6	87
\$400 & Over	-	103	41	32	20	3	199
Total	-	344	286	191	111	108	1,040

# Beneficiaries by Monthly Benefit and Age

Males	Age Last Birthday									
Benefit Amount	Under 50	50-54	55-59	60-64	65-69	70-74	75-79	80 & over	Total	
Under \$50	-	-	-	-	-	-	-	-	-	
<b>\$50 - 99</b>	-	-	-	1	-	-	-	-	1	
<b>\$100 - 149</b>	-	-	1	-	-	1	-	-	2	
<b>\$150 - 199</b>	-	-	-	-	-	-	1	-	1	
\$200 - 249	1	-	-	1	-	-	-	-	2	
\$250 - 299	-	-	-	1	-	-	-	-	1	
\$300 - 349	-	-	-	-	-	-	1	-	1	
\$350 - 399	-	-	-	-	-	-	-	-	-	
\$400 & Over	-	-	-	-	-	-	-	-	-	
Total	1	-	1	3	-	1	2	-	8	
Females										
Benefit Amount	Under 50	50-54	55-59	60-64	65-69	70-74	75-79	80 & over	Total	
Under \$50	-	-	-	-	-	-	-	1	1	
<b>\$50 - 99</b>	-	-	-	-	-	-	1	2	3	
\$100 - 149	1	-	2	2	4	5	8	34	56	
<b>\$150 - 199</b>	1	-	3	4	12	8	11	11	50	
\$200 - 249	5	2	5	6	7	7	7	3	42	
\$250 - 299	1	-	4	4	-	4	3	2	18	
\$300 - 349	1	-	3	4	2	2	1	-	13	
\$350 - 399	2	-	2	3	2	1	-	-	10	
\$400 & Over	-	-	2	-	-	-	-	-	2	
Total	11	2	21	23	27	27	31	53	195	
Males & Females										
Benefit Amount	Under 50	50-54	55-59	60-64	65-69	70-74	75-79	80 & over	Total	
Under \$50	-	-	-	-	-	-	-	1	1	
<b>\$50 - 99</b>	-	-	-	1	-	-	1	2	4	
<b>\$100 - 149</b>	1	-	3	2	4	6	8	34	58	
<b>\$150 - 199</b>	1	-	3	4	12	8	12	11	51	
\$200 - 249	6	2	5	7	7	7	7	3	44	
\$250 - 299	1	-	4	5	-	4	3	2	19	
\$300 - 349	1	-	3	4	2	2	2	-	14	
\$350 - 399	2	-	2	3	2	1	-	-	10	
\$400 & Over	-	-	2	-	-	-	-	-	2	
Total	12	2	22	26	27	28	33	53	203	

### Pensions Awarded in 2014 by Status

Average Age = 61.0

Males & Females		Status	
Benefit Amount	Retirees	Beneficiaries	Total
Under \$50	0	0	0
\$50-\$99	0	0	0
\$100-\$149	4	5	9
\$150-\$199	13	7	20
\$200-\$249	4	7	11
\$250-\$299	8	2	10
\$300-\$349	16	0	16
\$350-\$399	8	0	8
\$400 & over	27	0	27
Total	80	21	101
Males & Females			
Age Last Birthday	Retirees	Beneficiaries	Total
Under 50	0	4	4
50-54			
30-34	0	0	0
55-59	0	0 2	0 2
	_	~	_
55-59	0	2	2
55-59 60-64	0 70	2 2	2 72
55-59 60-64 65-69	0 70 9	2 2 6	2 72 15
55-59 60-64 65-69 70-74	0 70 9 1	2 2 6 3	2 72 15 4
55-59 60-64 65-69 70-74 75-79	0 70 9 1 0	2 2 6 3 3	2 72 15 4 3

# **Retirees by Service at Retirement and Years Since Retirement**

Average Service at Retirement = 19.5 Average Years Since Retirement = 8.6

Service at			Years Elapsed Since Retirement							
Retirement		0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	Totals	
Less than 5	Count	7	-	49	2	2	-	1	61	
	Avg. Benefit	\$513	-	\$513	\$304	\$273	-	\$246	\$288	
5-9	Count	28	12	7	12	12	-	-	71	
	Avg. Benefit	\$141	\$148	\$158	\$184	\$181	-	-	\$158	
10-14	Count	52	39	39	44	18	6	1	199	
	Avg. Benefit	\$188	\$192	\$209	\$224	\$216	\$237	\$230	\$205	
15-19	Count	45	62	47	14	11	10	1	190	
	Avg. Benefit	\$242	\$246	\$269	\$273	\$297	\$276	\$270	\$257	
20-24	Count	98	85	20	13	9	-	-	225	
	Avg. Benefit	\$308	\$307	\$340	\$357	\$348	-	-	\$315	
25-29	Count	91	42	12	20	3	-	-	168	
	Avg. Benefit	\$380	\$380	\$409	\$427	\$428	-	-	\$388	
30-34	Count	59	26	15	4	-	-	-	104	
	Avg. Benefit	\$456	\$457	\$493	\$457	-	-	-	\$462	
35 & Over	Count	16	5	1	-	-	-	-	22	
	Avg. Benefit	\$455	\$492	\$690	-	-	-	-	\$474	
Totals	Count	396	271	190	109	55	16	3	1,040	
	Avg. Benefit	\$317	\$299	\$294	\$289	\$260	\$261	\$249	\$301	

# **Retirees by Year of Retirement**

January 1, 2015 Total = 1040

Year of Retirement	Count	Year of Retirement	Count
<b>Under 1980</b>	-	1997	23
1980	-	1998	30
1981	-	1999	17
1982	-	2000	31
1983	3	2001	27
1984	-	2002	49
1985	1	2003	42
1986	3	2004	42
1987	2	2005	40
1988	4	2006	54
1989	6	2007	68
1990	8	2008	53
1991	10	2009	56
1992	11	2010	66
1993	13	2011	72
1994	13	2012	103
1995	19	2013	80
1996	19	2014*	75

<sup>\*</sup>May include retirements as of January 1, 2015

# **Thirty Year Projected Benefit Payments**

Year Ending December 31	Actives	Retirees*	Total
2015	\$ 361,685	\$ 4,225,003	\$ 4,586,688
2016	721,817	4,186,268	4,908,085
2017	1,090,272	4,143,114	5,233,386
2018	1,421,797	4,095,374	5,517,171
2019	1,719,250	4,042,919	5,762,169
2020	2,043,364	3,985,659	6,029,022
2021	2,333,911	3,923,526	6,257,437
2022	2,583,961	3,856,471	6,440,432
2023	2,845,771	3,784,464	6,630,235
2024	3,085,772	3,707,470	6,793,242
2025	3,325,988	3,625,452	6,951,441
2026	3,517,410	3,538,421	7,055,831
2027	3,648,164	3,446,429	7,094,593
2028	3,774,889	3,349,544	7,124,434
2029	3,913,407	3,247,857	7,161,264
2030	4,038,322	3,141,475	7,179,797
2031	4,162,183	3,030,519	7,192,703
2032	4,284,321	2,915,162	7,199,483
2033	4,382,091	2,795,612	7,177,703
2034	4,463,507	2,672,117	7,135,623
2035	4,517,654	2,544,983	7,062,637
2036	4,566,832	2,414,565	6,981,396
2037	4,638,408	2,281,311	6,919,719
2038	4,698,390	2,145,751	6,844,142
2039	4,732,283	2,008,455	6,740,738
2040	4,757,444	1,870,008	6,627,453
2041	4,762,796	1,731,063	6,493,858
2042	4,757,260	1,592,324	6,349,585
2043	4,746,632	1,454,599	6,201,231
2044	4,713,277	1,318,905	6,032,182

<sup>\*</sup> Includes Disabled Members, Beneficiaries, and Deferred Vested Members.



# APPENDIX A

SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS

### **Summary of Actuarial Assumptions and Methods**

The following methods and assumptions were used in preparing the January 1, 2015 actuarial valuation report.

#### 1. Valuation Date

The valuation date for any given year is January 1<sup>st</sup>, the first day of each plan year. This is the date as of which the actuarial present value of future benefits and the actuarial value of assets are determined.

#### 2. Actuarial Cost Method

The actuarial valuation uses the Entry Age Normal (EAN) actuarial cost method, amortized as a level dollar amount. Under this method, the employer contribution amount is the sum of (i) the employer normal cost amount, and (ii) the amount that will amortize the unfunded actuarial accrued liability (UAAL).

- a. The valuation is prepared on the projected benefit basis, under which the present value, at the investment return rate assumed to be earned in the future (currently 7.75%), of each participant's expected benefit payable at retirement or death is determined, based on his/her age, service, and sex. The calculations take into account the probability of a participant's death or termination of employment prior to becoming eligible for a benefit, as well as the possibility of his/her terminating with a service, or survivor's benefit. The present value of the expected benefits payable for the active participants is added to the present value of the expected future payments to retired participants and beneficiaries to obtain the present value of all expected benefits payable from the Fund on account of the present group of participants and beneficiaries.
- b. The employer contributions required to support the benefits of the Fund are determined using a level funding approach, and consist of a normal cost contribution and a unfunded accrued liability contribution.
- c. The normal cost contribution is determined using the "entry age normal" actuarial cost method. Under this method, a calculation is made to determine the average uniform and constant employer contribution amount which, if applied to each new participant during the entire period of his/her anticipated covered service, would be required to meet the cost of all benefits payable on his/her behalf based on the benefits provisions applicable for the individual member.

d. The unfunded actuarial accrued liability contributions are determined by subtracting the actuarial value of assets from the actuarial accrued liability and amortizing the result over 30 years from the valuation date.

#### 3. Actuarial Value of Assets

The actuarial value of assets is based on the market value of assets with a five-year phase-in of actual investment return in excess of (less than) expected investment income, with interest, dividends, and other income recognized immediately. Expected investment income is determined using the assumed investment return rate and the market value of assets (adjusted for receipts and disbursements during the year). The returns are computed net of administrative and investment expenses. An adjustment is made if the actuarial value is not within 20% of the Market Value. For any year following a year in which the 20% of market value adjustment was applied, the actuarial value is determined as if the adjustment was not applied in the previous year.

#### 4. Economic Assumptions

Investment return: 7.75% per year, compounded annually, composed of an assumed 3.25% inflation rate and a 4.50% net real rate of return. This rate represents the assumed return, net of investment expenses.

#### 5. Demographic Assumptions

#### a. Rates Before Retirement

Healthy Pre-Retirement Mortality:

RP-2000 Combined Mortality Table, fully generational, projected with Scale BB

Males: Set back 5 years with a multiplier of 104% Females: Set back 4 years with a multiplier of 90%

Healthy Post-Retirement Mortality:

RP-2000 Combined Mortality Table, fully generational, projected with Scale BB

Males: Set back 1 year with a multiplier of 104% Females: Set back 0 years with a multiplier of 90%

	Pre-Retirement		Post-Re	tirement	Witho	drawal
	Sample Rates	Shown Below Pr	ojected to 2015 us	sing Scale BB	Entry	Age
Age	Male	Female	Male	Female	<46	>45
20	0.03%	0.02%	0.03%	0.02%	20.00%	N/A
25	0.03%	0.02%	0.04%	0.02%	15.00%	N/A
30	0.04%	0.02%	0.04%	0.02%	11.00%	N/A
35	0.04%	0.03%	0.07%	0.04%	11.00%	N/A
40	0.08%	0.04%	0.10%	0.06%	9.00%	N/A
45	0.11%	0.07%	0.14%	0.10%	4.00%	15.00%
50	0.15%	0.11%	0.20%	0.14%	3.00%	15.00%
55	0.21%	0.16%	0.32%	0.23%	1.00%	8.00%
60	0.36%	0.25%	0.56%	0.39%	0.00%	5.00%
65	0.63%	0.44%	0.99%	0.73%	0.00%	5.00%
70	1.11%	0.82%	1.64%	1.26%	0.00%	5.00%
75			2.81%	2.11%	0.00%	5.00%
80			4.80%	3.45%	0.00%	5.00%
85			8.27%	5.82%	0.00%	5.00%
90			14.44%	10.04%	0.00%	5.00%
95			23.46%	15.99%	0.00%	5.00%
100			32.83%	20.43%	0.00%	5.00%

Retirement Rates: Members are assumed to retire at first eligibility.

### 6. Other Assumptions

- a. Percent married: 85% of employees are assumed to be married. (No beneficiaries other than the spouse assumed.)
- b. Age difference: Male members are assumed to be three years older than their spouses, and female members are assumed to be three years younger than their spouses.
- c. Percent electing annuity on death (when eligible): All of the spouses of vested, married participants are assumed to elect an annuity.
- d. Administrative expenses: Average of actual expenses for the prior two years, with each year projected at 6.50% to the valuation date.
- e. Decrement timing: Decrements of all types are assumed to occur mid-year.
- f. Eligibility testing: Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.

- g. Incidence of contributions: Contributions are assumed to be received continuously throughout the year.
- h. Benefit service: All members are assumed to accrue one year of service each year. All members are assumed to have contributed at the \$10.00 per month for the period before July 1, 1989.
- i. Premium tax allocation: Provided by staff and based on booked total premium taxes.



SUMMARY OF PLAN PROVISIONS

### **Summary of Plan Provisions**

#### **Covered Members**

A volunteer fireman shall become a participating member in the pension plan for each month there is contributed by or on behalf of the member an amount of twelve dollars and fifty cents (\$12.50) per month.

#### **Monthly Benefits**

As detailed in W.S. 35-9-608, eligibility and the monthly benefit payable for service retirement, the monthly benefit payable to the surviving spouse upon the member's death, and the monthly benefit payable to children under age 21 upon the member's and spouse's deaths are set forth in the table below. Members who only contributed \$5.00 per month for the period prior to July 1, 1989 accrue only ½ the benefit amount shown for that period of service. Total benefits paid shall not be less than \$5,000 or \$2,500 for members who contributed \$5.00 per month before July 1, 1989.

li-					r e				i
Age at Entry	Retirement	Member	Spouse		Age at Entry	Retirement	Member	Spouse	Children
into Plan	Age	Pension	Benefit	Benefit	into Plan	Age	Pension	Benefit	Benefit
15	60	691.44	460.96	230.48	41	60	253.36	168.91	84.45
16	60	673.46	448.97	224.49	42	60	240.29	160.19	80.10
17	60	655.48	436.99	218.49	43	60	227.21	151.47	75.74
18	60	637.50	425.00	212.50	44	60	214.13	142.76	71.38
19	60	619.52	413.01	206.51	45	60	201.06	134.04	67.02
20	60	601.54	401.02	200.51	46	61	201.06	134.04	67.02
21	60	583.56	389.04	194.52	47	61	192.88	128.59	64.29
22	60	565.58	377.05	188.53	48	62	192.88	128.59	64.29
23	60	547.59	365.06	182.53	49	62	184.71	123.14	61.57
24	60	529.61	353.08	176.54	50	63	184.71	123.14	61.57
25	60	510.82	340.54	170.27	51	63	176.54	117.69	58.85
26	60	493.65	329.10	164.55	52	64	176.54	117.69	58.85
27	60	475.67	317.11	158.56	53	64	168.36	112.24	56.12
28	60	457.69	305.13	152.56	54	65	168.36	112.24	56.12
29	60	439.71	293.14	146.57	55	65	160.19	106.79	53.40
30	60	421.73	281.15	140.58	56	66	160.19	106.79	53.40
31	60	403.75	269.17	134.58	57	66	152.02	101.35	50.67
32	60	385.77	257.18	128.59	58	67	152.02	101.35	50.67
33	60	367.79	245.19	122.60	59	67	143.85	95.90	47.95
34	60	349.81	233.20	116.60	60	68	143.85	95.90	47.95
35	60	331.83	221.22	110.61	61	68	135.67	90.45	45.22
36	60	318.75	212.50	106.25	62	69	135.67	90.45	45.22
37	60	305.67	203.78	101.89	63	69	127.50	85.00	42.50
38	60	292.60	195.06	97.53	64	70	127.50	85.00	42.50
39	60	279.52	186.35	93.17	65	70	119.33	79.55	39.78
40	60	266.44	177.63	88.81				_	

### Vesting

Eligibility 5 years of service if they became a member before February 5,

1993, or 10 years of service if they became a member on or after February 5, 1993 and terminate before their retirement age from

the table above.

Monthly Benefit Eligible members who terminate before their retirement age may

continue to make contributions to the plan until their retirement age. Upon reaching retirement age, the member would be eligible for the monthly benefit set forth in the table above. A member who does not meet the eligibility requirement is entitled to a

refund of contributions with interest.

#### **Pre-retirement Death Benefit**

Eligibility No age or service requirements.

Monthly Benefit A monthly benefit equal to the amount corresponding to the

spouse's benefit at the member's entry age from the table above, payable to the surviving spouse for their remaining lifetime. A lump sum payment of \$5,000, or \$2,500 for members who contributed \$5.00 per month before July 1, 1989, less the amount of monthly benefits paid to the surviving spouse will also be paid

to the estate of the spouse upon the spouse's death.

**Contributions** 

Employee \$12.50 per month.

State 50% of gross fire insurance premium taxes paid on fire insurance

policies in Wyoming.

Interest 3.00% annually.

**Cost-of-Living Improvements** W.S. 9-3-454 prohibits benefit changes, including cost-of-living

increases, unless the funded ratio stays above 100% plus a margin for adverse experience throughout the life of the benefit

change.